

Serial No. 10/609,317

Docket No.: KCC-13,485.1

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A process for registering a plurality of discrete components of a continuously moving second layer to reference marks on a continuously moving first layer in the manufacture of an absorbent article, comprising the steps of:

providing a continuously moving first layer including a plurality of reference marks selectively positioned thereon;

sensing a distance between two successive reference marks on the first layer and generating a signal in response to the sensed distance;

providing a second layer having a plurality of continuously moving discrete components, wherein the discrete components comprise components of an absorbent article;

sensing a distance between two successive components of the second layer and generating a signal in response to the sensed distance;

synchronizing a feed rate of the components of the second layer to a feed rate of the reference marks on the first layer;

aligning the components of the second layer a set distance to correspond with the reference marks on the first layer;

superimposing the discrete components of the second layer onto the continuously moving first layer; and

sensing the position of the superimposed components of the second layer relative to the corresponding reference marks on the first layer.

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2. (Original) The process of Claim 1 further comprising the step of correcting a setpoint of placement control for components of the second layer subsequent to superimposing the discrete components of the second layer onto the continuously moving first layer.

3. (Original) The process of Claim 1 comprising the step of aligning the components of the second layer and the corresponding reference marks on the first layer in direct alignment with one another.

4. (Original) The process of Claim 1 wherein the first layer is preprinted with at least one reference mark per product.

5. (Original) The process of Claim 1 further comprising the steps of:

providing a continuously moving third layer formed from a plurality of continuously moving individual components; and

superimposing the continuously moving third layer onto the continuously moving first layer subsequent to superimposing the discrete components of the second layer onto the continuously moving first layer.

6. (Original) The process of Claim 1 further comprising the steps of replacing the continuously moving first layer with a new continuously moving first layer including a plurality of reference marks selectively positioned thereon, wherein the reference marks on the new first layer are spaced apart at a distance different from the distance between successive reference marks on the original first layer; and synchronizing the feed rate of the components of the second layer to a feed rate of the reference marks on the new first layer.

Claims 7-8 (Canceled)

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9. (Previously Presented) The process of Claim 1 further comprising the step of filtering out signal anomalies.

10. (Previously Presented) The process of Claim 1 further comprising the step of calculating a standard deviation of distances between an actual position of the superimposed components relative to the corresponding reference marks and a preset target position.

11. (Original) The process of Claim 10 further comprising the step of comparing the standard deviation to a preset limit of deviation.

12. (Original) The process of Claim 11 further comprising the step of determining a new setpoint of placement control of the components.

Claim 13 (Canceled)

14. (Previously Presented) The process of Claim 1 further comprising the steps of replacing the continuously moving first layer with a new continuously moving first layer including a plurality of reference marks selectively positioned thereon, wherein the reference marks on the new first layer are spaced apart at a distance different from the distance between successive reference marks on the original first layer; generating a reference mark signal in response to each of the reference marks on the new first layer; and generating a new corrective control signal.

Claims 15-21 (Canceled)

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22. (Previously Presented) A process for registering a plurality of discrete components of a continuously moving second layer to reference marks on a continuously moving first layer in the manufacture of an absorbent article, comprising the steps of:

providing a continuously moving first layer including a plurality of reference marks selectively positioned thereon;

sensing a distance between two successive reference marks on the first layer and generating a signal in response to the sensed distance;

providing a second layer having a plurality of continuously moving discrete components, wherein the discrete components comprise components of an absorbent article;

sensing a distance between two successive components of the second layer and generating a signal in response to the sensed distance;

synchronizing a feed rate of the components of the second layer to a feed rate of the reference marks on the first layer;

aligning the components of the second layer a set distance to correspond with the reference marks on the first layer;

superimposing the discrete components of the second layer onto the continuously moving first layer; and

applying a first adhesive intermittently to at least one continuously moving individual component or layer by detecting a reference mark on the continuously moving first layer and, in response, turning on the adhesive applicator at a set time for a set duration.

Claim 23 (Canceled)